

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

**Claim 1.** (Currently Amended) A method for modulating the morphology of ~~cellulose~~  
softwood pulp fibers comprising the steps of

subjecting the pulp fibers to a metal ion-activated peroxide treatment carried out  
at a pH of between about 1 and about 9 and

subjecting the treated pulp fibers to a refining treatment to form refined paper  
making pulp fibers.

**Claim 2.** (Original) The method of Claim 1 wherein said metal ion is a transitional metal  
ion.

**Claim 3.** (Original) The method of Claim 1 wherein said metal ion is iron.

**Claim 4.** (Original) The method of Claim 1 wherein said pH is between about 3 and about 7.

**Claim 5.** (Original) The method of Claim 1 wherein the fibers are subjected to the solution  
at temperatures between about 40 degrees C to about 120 degrees C.

**Claim 6.** (Original) The method of Claim 1 wherein the fibers are subjected to the solution  
for between about 10 minutes to about 10 hour.

**Claim 7.** (Original) The method of Claim 1 wherein said peroxide is present with said  
solution at a concentration of between about 0.2% and about 5% based on pulp.

**Claim 8.** (Original) The method of Claim 1 wherein said metal ion is present in said  
solution at a concentration of between about 0.002% and about 0.1% on pulp .

**Claim 9.** (Currently Amended) The method of Claim 1 wherein said pulp fibers is subjected to said solution for a time sufficient to substantially act on at least the cellulose and hemi-cellulose of the pulp, causing oxidation and oxidative degradation of cellulose fibers.

**Claim 10.** (Original) A softwood pulp having a modified morphology, leading to paper making properties substantially functionally equivalent to hardwood pulp papermaking properties.

**Claim 11.** (Original) The softwood pulp of Claim 10 wherein the fibers of said softwood pulp, after treatment, exhibit a substantially shorter fiber length and distribution, and enhanced fiber collapsibility, than prior to treatment.

**Claim 12.** (Original) The softwood pulp of Claim 9 wherein said pulp is oxidatively degraded relative to untreated softwood pulp.

**Claim 13.** (Original) The softwood pulp of Claim 10 wherein the pulp exhibits a Canadian Standard Freeness of between about 115 and about 590.

**Claim 14.** (Original) The softwood pulp of Claim 13 wherein the pulp exhibits a Kajaani average fiber length of between about 1.0 and 1.9 mm.

**Claim 15.** (Original) A pulp comprising between about 50% and 90% hardwood pulp and the remainder being softwood pulp which has been subjected to a metal ion-activated peroxide treatment carried out at a pH of between about 2 and about 9 and a refining treatment.

**Claim 16.** (Original) The pulp of Claim 15 wherein said metal ion is a transitional metal.

**Claim 17.** (Original) The pulp of Claim 15 wherein said metal ion is iron and said pH is between about 3 and about 7.

**Claim 18.** (Original) The pulp of Claim 15 wherein said pulp is substantially functionally equivalent to a hardwood pulp as respects the usefulness of the pulp in papermaking.

**Claim 19.** (Original) The softwood pulp of Claim 11 wherein the pulp is used to manufacture a paper web material.

**Claim 20.** (New) The method of claim 1 wherein said softwood pulp fibers are Kraft pulp fibers.

**Claim 21.** (New) The method of claim 1 wherein said softwood pulp fibers are Southern Pine pulp fibers.

**Claim 22.** (New) The method of claim 1 wherein said softwood pulp fibers are bleached pulp fibers.

**Claim 23.** (New) The method of claim 1 wherein said softwood pulp fibers are bleached Kraft pulp fibers.

**Claim 24.** (New) The method of claim 1 wherein said refined pulp fibers exhibit a substantially shorter fiber length and distribution and enhanced fiber collapsibility than prior to treatment.

**Claim 25.** (New) The method of claim 1 wherein said refined pulp fibers exhibit paper making properties substantially functionally equivalent to hardwood pulp papermaking properties.

**Claim 26.** (New) The method of claim 1 wherein subjecting comprises treating said pulp fibers with a composition comprising peroxide and metal ions.

**Claim 27.** (New) The method of claim 1 wherein said metal ions are selected from the group consisting of iron, copper, cobalt or a combination of two or more thereof.